



## EX-1UTP-IR-50

50m/164ft HDMI Extension over HDBaseT incl.  
full 3D & Bidirectional IR

## EX-1UTP-IR-50-POH

50M/164FT HDMI Extension Over HDBaseT incl.  
Remote Power, full 3D & Bidirectional IR



## Instruction Manual



Thank you for choosing this WyreStorm product.  
Please read these instructions carefully before installing to avoid complications later.

# Contents

- 1 Introduction
- 2 Features
- 3 Safety Precautions
- 4 Packaging Contents
- 5 Specification
- 6 Panel Description
  - i. EX-1UTP-IR-50 Transmitter & Receiver
  - ii. EX-1UTP-IR-50 - POH Transmitter & Receiver
- 7 Typical Application
- 8 Connection & Operation
- 9 EDID & Distance Setting
- 10 Troubleshooting
- 11 FAQ's
- 12 Maintenance
- 13 Product Service
- 14 Mail In Service
- 15 Warranty
- 16 Warranty Limits and Exclusions
- 17 Installation Notes

## 1. Introduction

The WyreStorm EX-1UTP-IR-50 and EX-1UTP-IR-50-POH extender models feature Class B HDBaseT technology for an even more affordable HDBaseT extender solution over shorter distances up to 50m/164ft.

Designed for smaller projects that may not require the feature set of full HDBaseT yet still benefit from the signal stability and functions offered by this powerful technology, including distribution of full 1080p HD video, HD audio and bidirectional IR, with the PoH model including remote power passed through a single Cat5e/6 cable from the transmitter to power the display receiver.

The EX-1UTP-IR-50 and POH Extender models comprise of a transmitter and receiver to distribute full, uncompressed HD 1080p video @60Hz, HD multichannel audio with bidirectional discrete IR control

of source and display from either location over distances of up to 50m/164ft using a single shielded or unshielded Cat5e/6 cable.

The EX-1UTP-IR-50-POH features Power-over-HDBaseT technology, that enables the transmitter to draw 12v power from a mains supply and pass the current along the length of a single Cat5e/6 cable along with the video, audio and control signals to power the receiver - no power access is necessary at the display location for ease of installation and connection; meaning no additional power adaptors required and improved energy efficiency.

Transmitters of both models include EDID management to manually handle device communication via DIP switch setting, with Receivers containing cable distance setting mode to encourage successful transmission if the distance of the cable run is an issue. Transmitters and receivers of both models also feature protection against ESD (electrostatic discharge) to further stabilise transmission with LED indication on the unit housing providing clear confirmation of power and signal link status.

Both models are fully cascable with distribution increased by connecting multiple extenders for greater flexibility, whatever the application.

## 2. Features

- HDBaseT extenders capable of 1080p HD @60Hz and HD multichannel audio transmissions up to 50m/164ft under perfect conditions\*
- Discrete two-way IR control signal together with HDMI signal over a single Cat5e/6/7 cable
- Power-over-HDBaseT (PoH) - 12v Mains connected Transmitters pass unidirectional power along the Cat5e/6 to remotely power display receivers - no additional power required at display locations. (EX-1UTP-IR-50-POH only)
- Fully supports 3D applications - frame packing/ sequential (Blu-ray) and Interlaced Stereoscopic (satellite/ cable) broadcasts
- Supports 36bit Deep Colour
- HDMI V1.4
- Cable termination follows IEEE-568B standards
- HDCP compliant
- Automatically adjusts feedback, equalisation and amplification of signal for easy installation.
- LED indication for visual power and HDMI / HDBaseT video signal status.

\* Perfect transmission conditions denote straight cable runs with no electrical interference, bends, kinks, patch panels or wall outlets.

### 3. Safety Precautions



#### WARNING

To reduce the risk of fire, electric shock or product damage:

1. Do not expose this apparatus to rain, moisture, sprays, drips or splashes and ensure that no objects containing liquids are placed on the apparatus, including cups, glasses and vases.
2. Do not place this unit in a confined space such as enclosed shelving, cabinets or bookshelves. Ensure the unit is adequately ventilated.
3. To prevent the risk of electric shock or fire hazard due to overheating, do not cover the unit or obstruct ventilation openings with material, newspaper, cardboard or anything that may restrict airflow into the unit.
4. Do not install near external heat sources such as radiators, heat registers, boilers or any device that produces heat such as amplifiers or computers and do not place near sources of naked flame.

5. Unplug apparatus from power supply during lightening storms or when unused for long periods of time.
6. Protect the power cable from being walked on, pinched or restricted in any way, especially at plug connections.
7. Only use attachments/accessories specified by the manufacturer.
8. Units contain non-servicable parts - Refer all servicing to qualified service personnel.

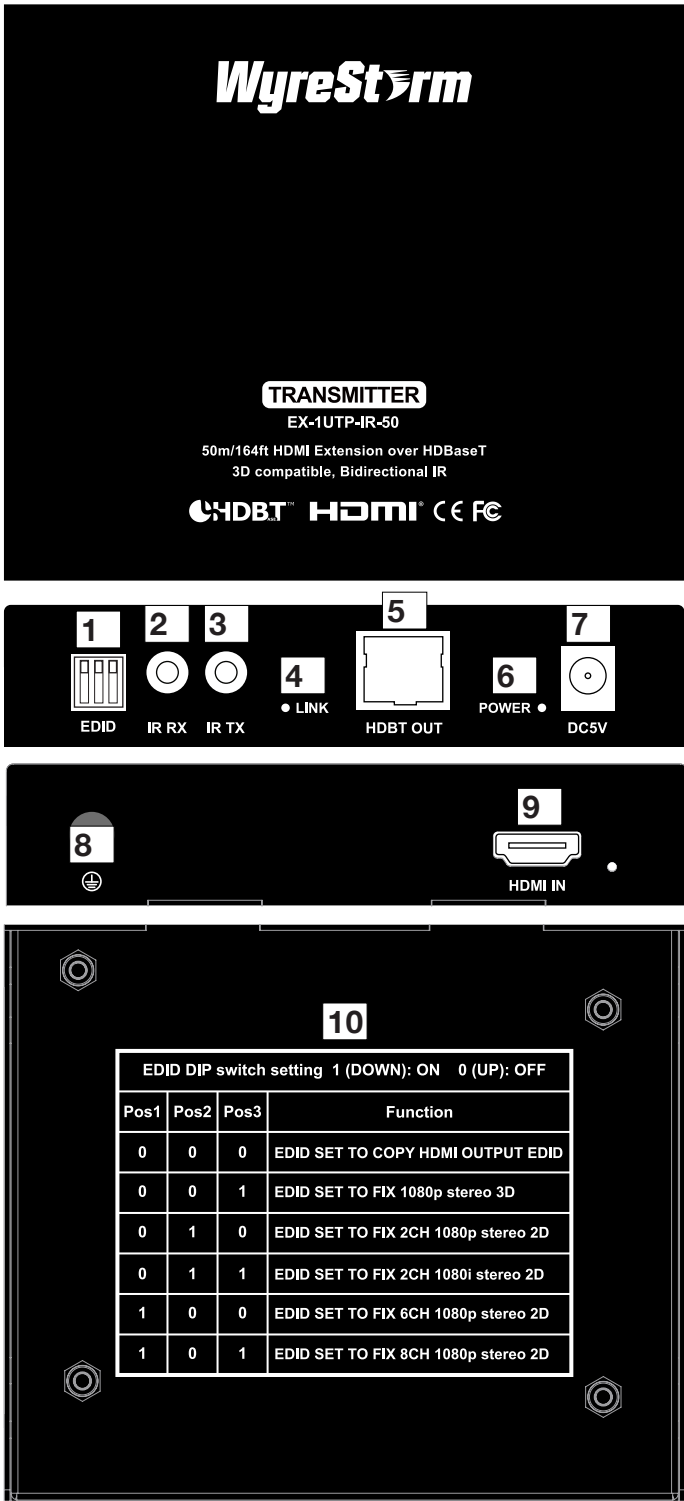
### 4. Package Contents

- 1 x WyreStorm EX-1UTP-IR-50 / EX-1UTP-IR-50-POH Transmitter
- 1 x WyreStorm EX-1UTP-IR-50 / EX-1UTP-IR-50-POH Receiver
- 1 x Printed product manual and quick start guide (also downloadable from this product main page)
- 2 x pairs of mounting brackets for transmitter/receiver
- 2 x 5VDC power supply (EX-1UTP-IR-50) / 1 x 12VDC power supply (EX-1UTP-IR-50-POH)
- 1 x IR TX for IR control of to Source device from display zone
- 1 x IR RX to receive IR control signals in Display zone to Source. (IR frequency range: 940nm IR Frequency: 38KHZ)

### 5. Specification

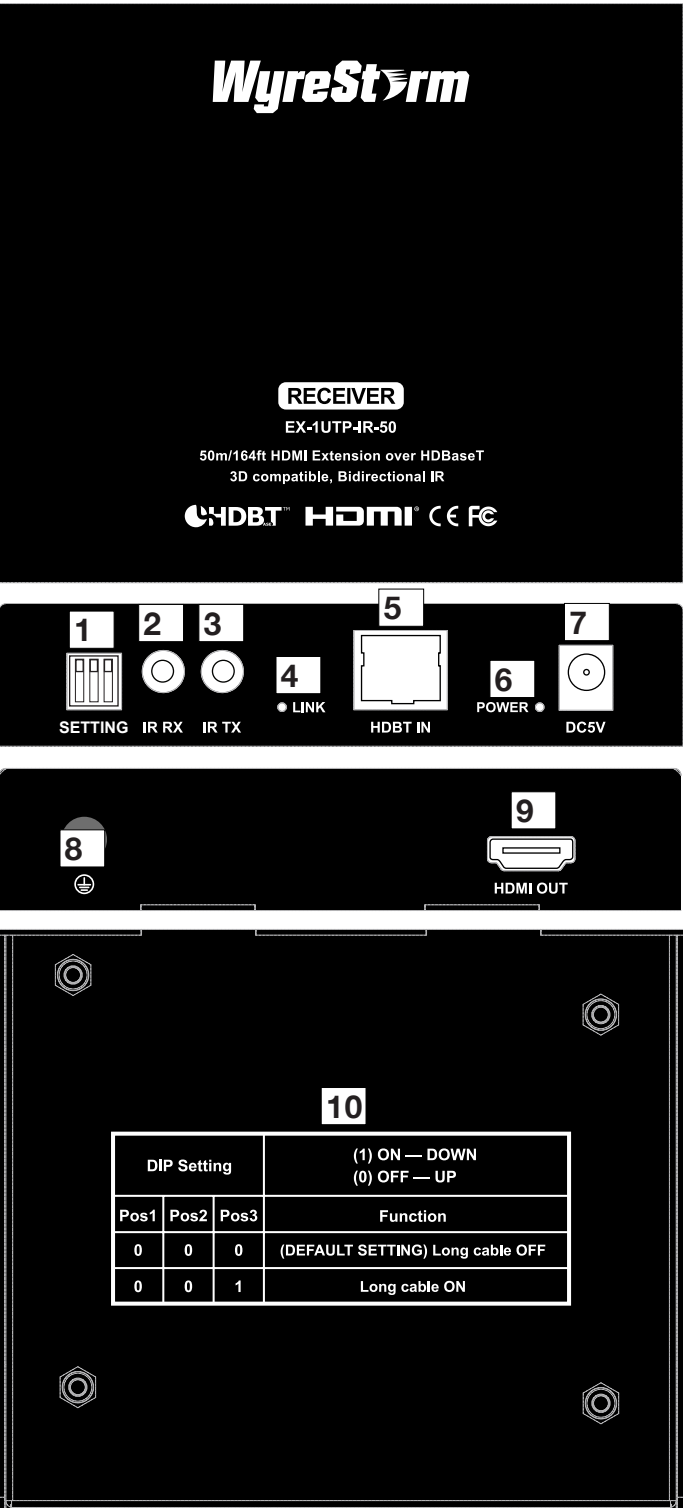
Dimensions (WxHxD):	120mm/4.72" x 24mm/0.94" x 101mm/3.97"
Weight	0.36kg / 0.79lb (Each)
Operating Temperature Range:	-5 to +35°C (-41 to +95 °F)
Operating Humidity Range:	5 to 90 % RH (no condensation)
Video Amplifier Bandwidth:	6.75Gbps
Input Video Signal:	0.5-1.0 volts p-p
Input DDC Signal:	<b>EX-1UTP-IR-50</b> 5 volts p-p TTL (Transmitter), 5 volts p-p TTL (Receiver) <b>EX-1UTP-IR-50-POH</b> 12 volts p-p TTL (Transmitter), 5 volts p-p TTL (Receiver)
Maximum Single Link Range:	1080p 36bit colour depth
HDMI Transmission distance:	1080p signal up to 15m/ 49ft HDMI
Video Format Supported:	VESA: 640x480, 800x600, 1024x768, 1280x1024, 1600x1200, 1920x1080, 1920x1200 DTV/HDTV: 480i/576i/480p/576p/720p/1080i/1080p
Output Video:	HDMI 1.4+HDCP (Sync mirrors source), including 3D - frame packing/sequential (Blu-Ray) and Stereoscopic (Satellite/Cable broadcasts)
Maximum Cat5e/6 transmission distance:	1080p signal up to 50m / 164ft (Under perfect transmission conditions including straight cable runs with no electrical interference, bends, kinks, patch panels or wall outlets.)
Power Consumption:	<b>EX-1UTP-IR-50</b> 2.5 Watts (Transmitter) 5 Watts (Receiver) <b>EX-1UTP-IR-50-POH</b> 15 Watts (Transmitter) 5 Watts (Receiver) - power drawn from Transmitter or mains
BTU Rating (British Thermal Unit):	<b>EX-1UTP-IR-50</b> 25.59 <b>EX-1UTP-IR-50-POH</b> 51.02

# 6i. Panel Description - EX-1UTP-IR-50 Transmitter



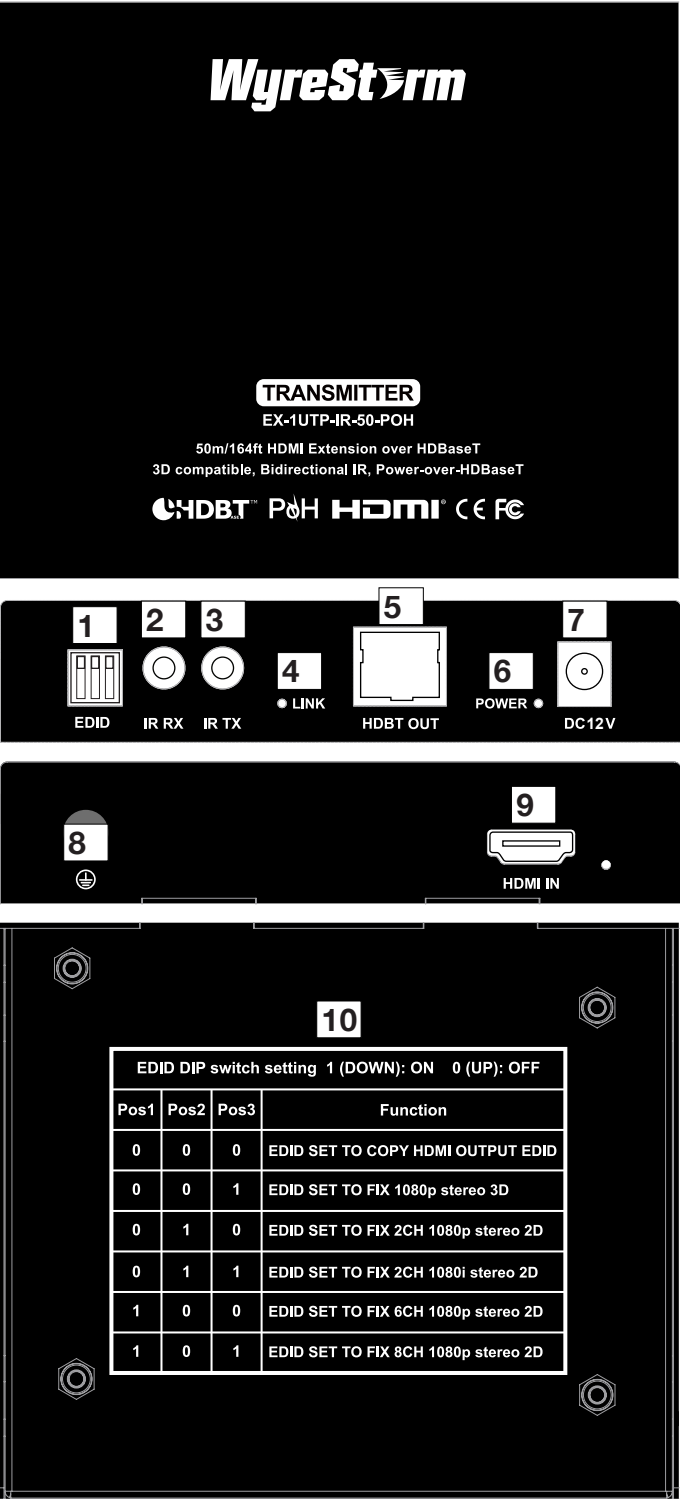
- 1 EDID management – see Transmitter EDID Settings for details (section 9)
- 2 IR RX Input – 3.5mm IR Receiver placed at display location to remotely control the source device.
- 3 IR TX Output – 3.5mm IR Transmitter connecting to source device for control from display location.
- 4 Signal LINK status – LED lit when signal detected
- 5 HDBaseT OUTPUT
- 6 Power indication – LED lit when powered
- 7 5v Power Input
- 8 Ground Point
- 9 HDMI INPUT
- 10 EDID DIP Switch settings printed on base of Transmitter

# Panel Description - EX-1UTP-IR-50 Receiver



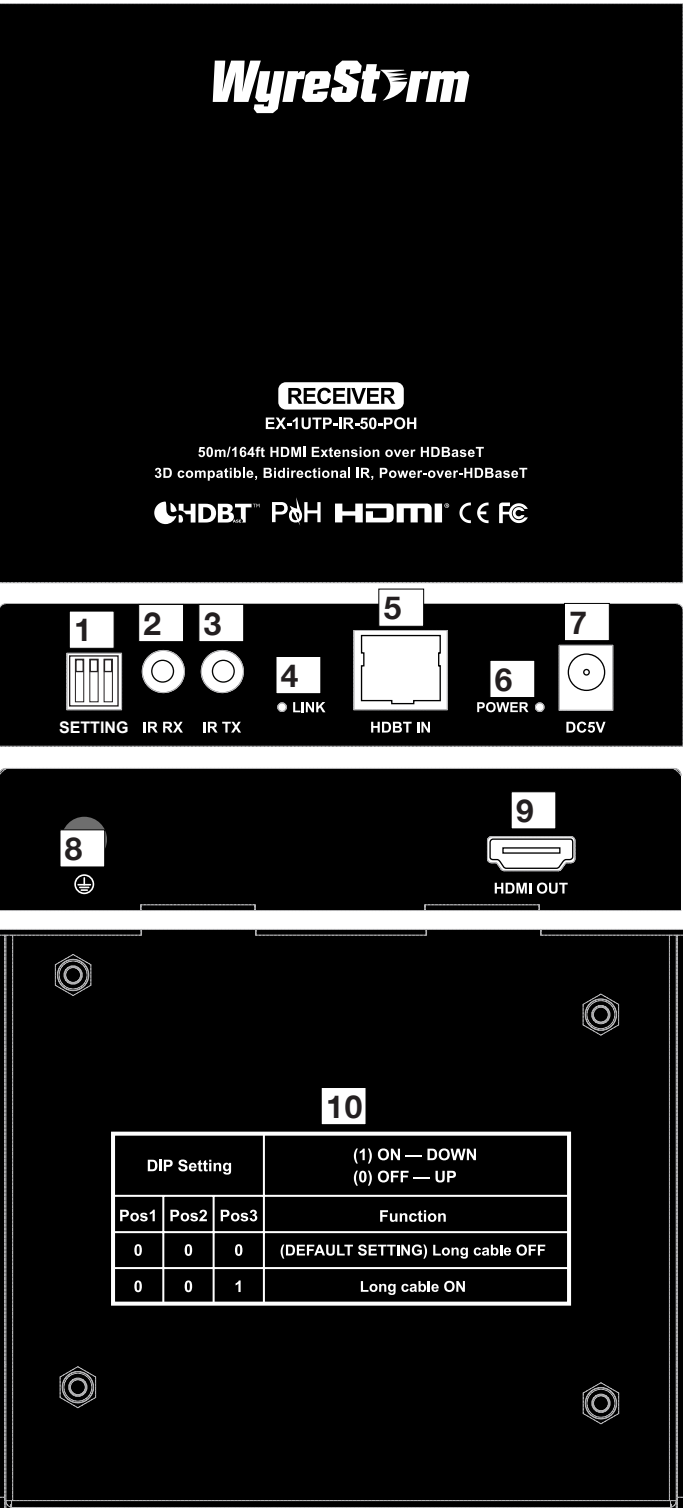
- 1** Distance SETTING - see Receiver distance Settings for details (section 9)
- 2** IR RX Input – 3.5mm IR Receiver placed at display location to remotely control the source device.
- 3** IR TX Output – 3.5mm IR Transmitter connecting to source device for control from display location.
- 4** Signal LINK status – LED lit when signal detected
- 5** HDBaseT INPUT
- 6** Power indication – LED lit when powered
- 7** 5v Power Input
- 8** Ground Point
- 9** HDMI OUTPUT
- 10** SETTING DIP Switch settings printed on base of Receiver

# 6ii. Panel Description - EX-1UTP-IR-50-POH Transmitter



- 1** EDID Management - see Transmitter EDID Settings for details (section 9)
- 2** IR RX Input – 3.5mm IR Receiver placed at display location to remotely control the source device.
- 3** IR TX Output – 3.5mm IR Transmitter connecting to source device for control from display location.
- 4** Signal LINK status – LED lit when signal detected
- 5** HDBaseT OUTPUT
- 6** Power indication – LED lit when powered
- 7** 12v Power Input
- 8** Ground Point
- 9** HDMI INPUT
- 10** EDID DIP Switch settings printed on base of Transmitter

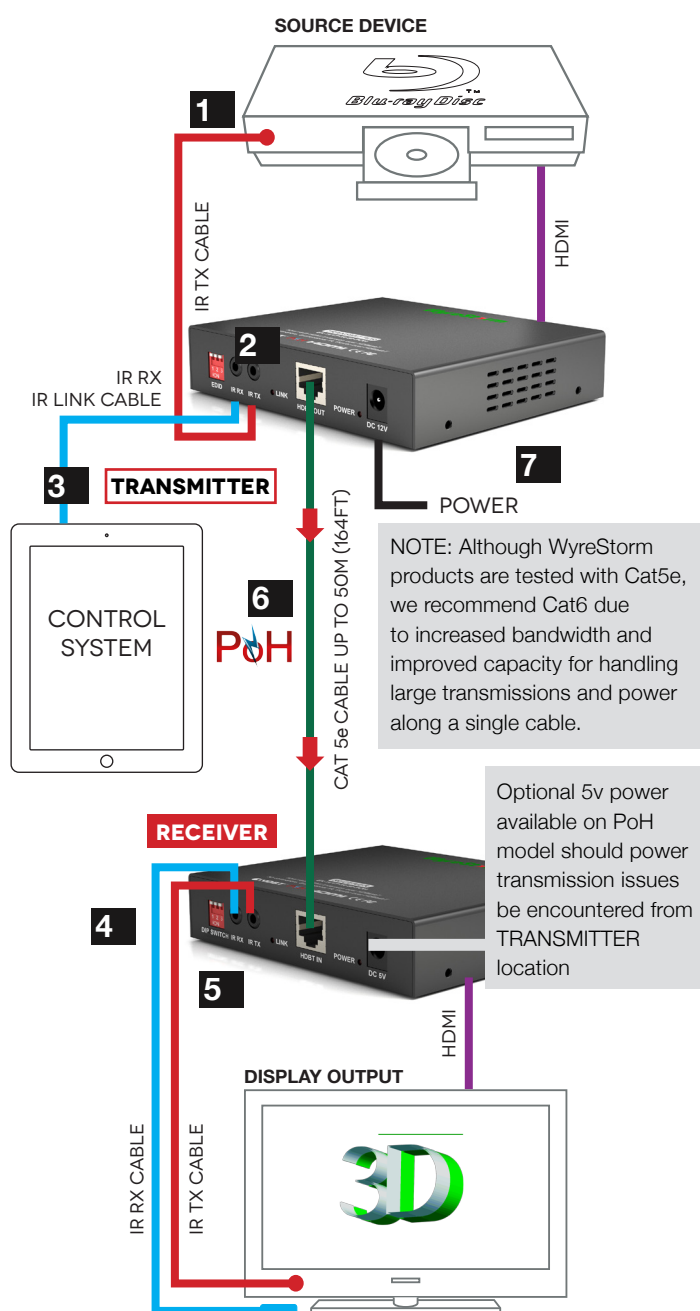
# Panel Description - EX-1UTP-IR-50-POH Receiver



- 1** Distance SETTING - see Receiver distance Settings for details (section 9)
- 2** IR RX Input – 3.5mm IR Receiver placed at display location to remotely control the source device.
- 3** IR TX Output – 3.5mm IR Transmitter connecting to source device for control from display location.
- 4** Signal LINK status – LED lit when signal detected
- 5** HDBaseT INPUT
- 6** Power indication – LED lit when powered
- 7** 5v Power Input – optional: for use if power supply issues are experienced at Transmitter location.
- 8** Ground Point
- 9** HDMI OUTPUT
- 10** SETTING DIP Switch settings printed on base of Receiver



## 7. Typical Application



## 8. Connection & Operation

- 1 Place the IR TX eye directly over the infrared receiving area of the source device (i.e. Blu-Ray, cable/satellite box etc.), and secure with the adhesive backing. Location of the IR TX eye on the source device may need to be adjusted later to achieve best IR performance.

**NOTE** Infrared windows can be seen by shining a flashlight onto the front of the device – the IR sensor will appear as a small, round diode behind the fascia.

- 2 Connect the IR TX jack to the IR TX port on the EX-1UTP-IR-50 / EX-1UTP-IR-50-POH Transmitter. For bidirectional control of display from Transmitter location, if using a conventional remote control handset, connect an IR RX from IR RX port of the Transmitter, ensuring a clear line of sight between the IR RX eye and the handset being used to control.

- 3 If using a control system, connect an IR Link cable from the IR RX port of the Transmitter to your control system

**NOTE** An infrared control signal can be passed from the Transmitter to the display location e.g. a control system sending a “TV off” command.

- 4 Connect the IR RX to the IR RX port on the EX-1UTP-IR-50-POH Receiver. Using the adhesive backing, affix the IR RX eye to the display, ensuring there is a clear line-of-sight with the remote control handset in the room.

- 5 For bidirectional control, connect an IR TX to the IR TX port of the Receiver. Place the IR TX eye directly over the infrared receiving area of the display, securing with the adhesive backing. Location of the IR TX eye on the display device may need to be adjusted later to achieve best IR performance.

**ATTENTION** We strongly recommend using supplied mounting brackets to secure Transmitter & Receiver baluns. Sudden movement of these devices could lead to loss of picture/sound if connections become loose or strained, resulting in unnecessary service call-backs.

- 6 Connect the Transmitter & Receiver baluns with a good quality, well terminated and tested Cat5e/6/7 cable with RJ45 connectors wired to the 568B standard at both ends. Ensure all connectors are pushed securely to each port and supported by the connector strain relief clip to prevent them from becoming loose.

**ATTENTION** The quality of cable and RJ45 termination is essential for successful distribution of video, audio, control and power from Transmitter to Receiver. Poor cable and terminations lead to intermittent performance and longer install times.

- 7 Finally, add the provided power supplies to the Transmitter and connect to the mains:

**EX-1UTP-IR-50: 5VDC**

**EX-1UTP-IR-50-POH: 12VDC**

**NOTE** EX-1UTP-IR-50-POH: 12v powers the transmitter and carries power along the length of the cable to power the display Receiver so no additional power is required at the display location.



**ATTENTION** We do not recommend passing power remotely over excessively long cable distances as this can affect the performance of the product.

**NOTE** A 5v power input is included on the Receiver for optional use should power issues be encountered at the Transmitter location.

## 9. EDID & Distance Setting

Distribution of HD signals through devices requires mutual communication or 'handshake' between source and display. If there is any disparity between the two, successful transmission becomes problematic.

EX-1UTP-IR-50 / EX-1UTP-IR-50-POH extender sets comes equipped with EDID management on the Transmitter to encourage communication between INPUT and OUTPUT devices and Distance SETTINGS on the Receiver to toggle Long Cable mode ON/OFF should the length of the cable run impact transmission quality. If compatibility or transmission issues arise during installation, check the settings on your connected devices and adjust the DIP settings as required.

**ATTENTION** Changes to DIP settings become effective upon powering ON baluns. Changes to settings should be made with all devices OFF, ideally with all power cables and HDMI leads and UTP cables removed to guard against electrostatic build up that may damage your system.

**DO NOT HOTSWAP** your cables when changing DIP SETTINGS.

**ATTENTION** Make sure switches are set to **DEFAULT** for initial installation.

Remove all cables and power supply for switch changes to take effect. Switch settings become active on re-boot.



### Transmitter

Default: EDID set to copy HDMI Output EDID

### Receiver

Default: Long cable setting OFF



### Transmitter

EDID set to 1080p Stereo - 3D

### Receiver

Long cable setting on



### Transmitter

EDID set to 1080p 2ch Stereo - 2D

### Receiver

Reserved for future use - no function



### Transmitter

EDID set to 1080i 2ch Stereo - 2D

### Receiver

Reserved for future use - no function



### Transmitter

EDID set to 1080p 5.1 - 2D

### Receiver

Reserved for future use - no function



### Transmitter

EDID set to 1080p 7.1 - 2D

### Receiver

Reserved for future use - no function

### Transmitter

EDID DIP switch setting 1 (DOWN): ON 0 (UP): OFF			
Pos1	Pos2	Pos3	Function
0	0	0	EDID SET TO COPY HDMI OUTPUT EDID
0	0	1	EDID SET TO FIX 1080p stereo 3D
0	1	0	EDID SET TO FIX 2CH 1080p stereo 2D
0	1	1	EDID SET TO FIX 2CH 1080i stereo 2D
1	0	0	EDID SET TO FIX 6CH 1080p stereo 2D
1	0	1	EDID SET TO FIX 8CH 1080p stereo 2D

### Receiver

DIP Setting			(1) ON — DOWN (0) OFF — UP
Pos1	Pos2	Pos3	Function
0	0	0	(DEFAULT SETTING) Long cable OFF
0	0	1	Long cable ON

**NOTE** For ease of installation and convenience on site, we have printed the DIP SETTINGS for both Transmitter and Receiver on the base of the units.

## 10. Troubleshooting

Generally, the majority of HD distribution installation issues are either caused by minor connection errors, communication problems between devices, or when the transmission of high signal bandwidth is attempted using insufficient cable. Should you encounter any technical difficulties when installing and configuring the matrix, we are confident solutions can be found by working through the following troubleshooting checklist before seeking alternative technical support.

### No picture or poor quality picture

**1) Power** – are your HDBaseT transmitter and receiver baluns powered at both ends?  
HDBaseT transmitters and receivers each require their own 5v power sources to operate.  
HDBaseT PoH-enabled transmitters require their own 12v power supply, while PoH display receivers typically do not need to be locally powered. However, if power issues from the transmitter location are experienced, a 5v power source can be used at the display receiver location.

Are all sources definitely powered and firmly connected?

**2)** If possible, always use test equipment prior to installation and to troubleshoot any problems.



**Test Monitor**  
Part Number TTMONITOR



**Signal Generator**  
Part Number TTSignal

**3) Distance** – Is your cable too long for the signal to be transmitted effectively?

HDBaseT allows transmission of 1080p various distances from 50m/164ft, 70m/230ft, and 100m/328ft so make sure your cable distance matches your requirements, model of extender, and is well within the maximum transmission distance of the signal.

**Note:** If you are approaching the limits of the transmission capabilities, you will need to use an additional WyreStorm Extender set for the signal to transmit effectively.

**4) Cable joins?** Joins in your cable run can impact on signal strength, resulting in reduced transmission that may manifest itself in poor picture quality or a complete lack of picture

**5) Signal Reduction** – Are you using stranded patch leads as interconnects between patch panels or wall outlets? Such use reduces signal strength – we recommend solid core straight through connections to be used wherever possible.

**6) Resolution** – If you reduce the resolution of the source, do you get a picture? If so, this suggests a discrepancy between source and display resolution or a bandwidth capacity issue with your cable. Check that your inputs and outputs share the same resolution and that the signal is being successfully transmitted along your cable run.

**7) Correct connection** – It may seem obvious but double check all UTP, HDMI, power and IR cables are connected to the correct ports.

Note: Even a fraction off can be the difference between a perfect picture and a blank screen. Double check all connections are firmly made in the correct ports.

**9) Cable wired to 568B standard?** Is your cable wired and terminated correctly and are those terminations connected to the correct ports?

**10) Electrical interference** – HDBaseT is less susceptible to interference compared to regular transmissions but the location of cables and devices should be considered - could any form of interference be generated? If so, attempt to remove the source of electrical interference or move the cable run to decrease the effects of the interference.

**11) Do you get a picture if you connect the source directly to the display?** If not then the problem could lie with the input or output device rather than the means of distribution i.e. the cable or matrix itself.

**12) HDMI lead condition and quality** – HDMI cables and connectors are delicate and can be damaged much easier than component or coax cable. Furthermore, lead quality varies dramatically, particularly in lower price brackets. Swap your HDMI or VGA leads and check operation – damage to or quality of your leads could be the problem. If in doubt, swap them over. Always take care inserting and extracting your cables from ports so as not to damage the connectors or ports.

**13) Picture snow/HD 'noise'** – represents a poorly established signal that may be caused by poor quality terminations or excessive cable lengths. Try swapping the display adaptors from a location you know is functioning properly or swapping the outputs of the matrix switch used.

If the problem remains on the same screen this may be caused by a connection problem between matrix and display – turn off all equipment and swap the signal carrying cables at both ends to ascertain if the cable or termination is at fault.

**14) Blu-ray: Deep Colour** – make sure Deep Colour is turned on in your Blu-ray settings and displays.

**15) Blu-ray: Resolution** – if a reduction of resolution to 720/1080i produces an image, cable issues such as interference, patch panels, wall outlets, stranded cable use or excessive cable length are likely restricting transmission of a full 1080p signal.

**16) Blu-ray: 3D** – is the equipment used 3D enabled/compatible? Is a 3D disc being played in a 3D enabled Blu-ray player or through a compatible amplifier?

**17) Colour distortion** – a pink or green screen indicates an incompatibility between colour spacing formats – the commonly used RGB or YUV used by older displays. Some sources allow switching between RGB and YUV which may solve any colour problems. If not, try changing the HDMI cable between the source and the matrix to rule out defective cabling.

**Audio is transmitted within the video signal – there is no separate audio track – so generally a problem with sound will be accompanied by a problem with picture. However, if technical issues with audio are experienced, the cause is typically communication between sources, displays and/or AV receiver settings.**

## No sound or poor quality audio

**1) If using an AV receiver,** check your source input assignment – do you have specific speaker sets or zones enabled? Some AV receivers allow individual speaker

selections assigned to specific zones in the set up so check the speakers used are fully connected to the amplifier and correctly assigned within the system set up.

**Note:** If you experience problems when an AV receiver is used, the cause is usually the settings of the AVR itself. Refer to the AVR manufacturer's guidelines on the correct settings to use for your requirements.

**2) Consistency of audio output between devices** – Is there any discrepancy between the audio output of the source, the audio or zonal settings of the AV receiver and the speaker configuration used needed for successful audio replication? If you are outputting 5.1, make sure all devices connected are also outputting 5.1

**Note:** Occasionally with some sources, the device settings allow the specification of audio output through a TV or an HDMI port. If using an AV receiver, check the HDMI output option is selected.

**3) Do all the local sources work through the AV receiver?**

Check the operation of each source individually.

## Bandwidth

**1) Check you are using the correct IR magic eyes/cables,** connected to the correct ports of each Transmitter and Receiver device at locations: IR TX (small/round eye) - connected to device IR window and enable control of device. IR RX (larger/rectangular eye) - positioned in clear line of sight with the remote control handset used in the room.

## IR

**1) Check you are using emitters at the IR TX transmitter end and receivers at the IR RX receiver end** – are they connected to the correct ports on the matrix and display receiver.

**2) Is the IR eye correctly positioned on the source?**

Fix the IR eye directly over the infrared sensor of the source and attach using the adhesive backing.

Note: Locate the infrared source sensor by using a

flashlight to find a small sensor within the fascia of the source display. If necessary, secure the IR eye over the sensor with a small amount of contact adhesive.

### 3) Is your remote powered and sending a signal?

Note: IR is invisible to the naked eye, so use a digital camera/ phone camera to check the remote signal – point the camera at the remote control when pressing a button. You should see the remote transmission diode flashing to indicate a signal being sent. Replace batteries if flashing is not seen on the digital camera screen.

4) IR dropout issues can be due to exterior influences emitting infrared radiation that can interrupt IR signals. Ensure IR TX and IR RX eyes are away from the following causes of IR interference.

- Direct sunlight
- Halogen lighting
- Plasma screens

5) **UTP Termination Issues** - swap cables over at both transmitter and receiver ends to see if control is established. If so, a possible re-termination of the cable could remedy the problem.

6) **Are you using WyreStorm IR TX, IR RX and IR Link cables?** The use of third party products/magic eyes may not be compatible. Always use WyreStorm components included with your purchase or check compatibility of third party control systems with your WyreStorm dealer.

7) If problems persist, swap out the IR TX / IR RX, transmitters and receivers to rule out faults with the units themselves. Use IR TX and IR RX cables/eyes you know are fully operational to test working condition.

8) If connected to a matrix switcher, reactivate the IR callback function on the matrix and swap IR ports on the matrix to rule out a fault with the device connection ports.

9) Should IR remain unresponsive, turn off and disconnect all cables and reconnect zones one at a time to assess if one location in particular is the problem. If so, run new cables directly to the display – if this fixes the problem, it is likely that electromagnetic interference /damage to the cable somewhere along the run is causing the IR signal to drop out. Investigate and remove EM interference from the run or replace damaged UTP cable.

## 11. FAQ's

### 5e or 6?

While our equipment is tested and graded to Cat 5e cable standard; tests have shown that better results are achieved when using Cat6 cable. The lower gauge, thicker copper cores ensure better signal transfer. Newly installed cabling should always conform to Part P Regulation and BS 7671 (17th Edition), and should be terminated to 568B standard

### Can I use a single Cat 5e cable?

Although conventional transmission is considered to be two Cat 5e cables, it is possible to send the signal down a single cable if necessary. All of our pro-matrix switches and UTP splitters support single UTP mode, however in this mode IR control of sources and matrix switching is not possible. However using HDBaseT transmission; all of the twin cable features are supported with the added benefit of Ethernet and RS232 control.

### How far can the signal travel?

Under perfect transmission conditions our HD receivers will operate at 30, 50 or 100m (@1080p) depending on the model used. Perfect conditions mean no electrical interference, straight cable runs with no bends or kinks and no patch panels or wall outlets. If some of the above are factors in your installation then signal strength and bandwidth can be compromised. If a cable run is reaching the upper limit of the receivers' capabilities, then the signal can be boosted by way of an extender set (Rx TX) or by simply using an in-line repeater. Our transmission signals can be repeated up to 5 times (250m) using a conventional TMDS signal or 7 times (700m) using HDBaseT technology.

### What about 3D?

All of our matrix switches and most of our extender products will pass-through a 3D Blu-ray signal. The 30m and Coax extender sets do not support frame sequential 3D (Blu-ray), but will still pass-through interlaced stereoscopic 3D (Satellite etc.)

### How do I control the sources?

Most of our HDMI distribution products support some kind of IR pass-through from point-to-point extender sets to pro and HDBaseT matrices. Most of the range now supports wideband IR meaning it is compatible with any IR device available on the market. Our Pro and HDBaseT matrix range (Cat 5e) has IR pass-through from each of the outputs and has discrete IR outputs at the switch end, meaning you can have multiple identical sources yet the

IR would be routed only to the applicable source.

### Do I need power at the TV end?

Yes. Our HD display adaptors require a 5v power supply at the TV end to operate. It's important that these are powered locally and do not receive remote power from the rack as there can be issues resulting from voltage drop along the length of cable. Our new USB power cables overcome the problem of having a second mains outlet behind the TV. These useful leads draw the 5v from the USB socket on the TV to power the receiver, this also means that the receiver is only powered when the TV is on making the system more environmentally friendly.

### Are WyreStorm products compatible with HDMI 1.4?

HDMI 1.4 refers to a list of 'features' that a device is capable of supporting, including Ethernet channel, return audio channel, 3D etc. Due to the continuously evolving nature of the technology, HDMI Licensing LLC have now decided to simplify terminology by testing and referring to cable in terms of STANDARD or HIGH-SPEED rather than in generations 1.3, 1.4 etc.

- STANDARD (or "category 1") HDMI cables perform at speeds of 75Mhz or up to 6.75Gbps, which is the equivalent to a 720p/1080i signal.
- All WyreStorm equipment support HIGH-SPEED (or "category 2") HDMI cables that have been tested to perform at speeds of 340Mhz or up to 10.2Gbps, which is the highest bandwidth currently utilised over an HDMI cable and can successfully handle 1080p signals including those at increased color depths and/or increased refresh rates from the Source. High-Speed cables are also able to accommodate higher resolution displays, such as WQXGA cinema monitors (resolution of 2560 x 1600).

### What about screens with different resolution capabilities?

When sending a signal point to point a TV will communicate it's capabilities to the source, then the source will output a suitable signal that compatible (i.e. 1080p Stereo audio). If you were to use a matrix switch with three 1080p screens and one 1080i screen, the resultant image would be 1080i across all screens. The matrix switches do not scale per output but instead negotiate with the source a signal that all screens are capable of supporting.

### How do WyreStorm devices handle HDCP?

HDCP (High Definition Copyright Protection) is a feature built in to HDMI devices to prevent theft of or illegal distribution of HD content. Unlike competing products, WyreStorm devices are legal and comply with HDCP regulations. They do this by assigning a "key" to every

display connected to the switch. HDCP "keys" are assigned to a display when connected to a HDMI device normally. This doesn't change when connected to a switch; it just assigns more of them.

### I can get 1080i but not 1080p at a TV location

Firstly ensure that both the source is outputting 1080p and that the TV is Full HD 1080p screen. If this is the case then the receiver may need setting up for long cable mode using the DIP switches. This useful feature uses an alternative Equalisation method to re-sync the signal over longer distances. (feature available on selected models)

### I cannot get a signal out from my A/V receiver along a Cat 5e extender set

Check to ensure that the A/V Receiver isn't adding CEC (HDMI Control Protocol) to the outgoing signal, this can sometimes have an effect on the HDMI signal.

## 12. Maintenance

Clean this unit with a soft, dry cloth only. Never use alcohol, paint thinner or other harsh chemicals.

## 13. Provided Service

1) Damage Requiring service: The unit should be serviced by qualified service personnel if:

- **The DC power supply cord or AC adaptor has been damaged;**
- **Objects or liquids have gotten into the unit;**
- **The unit has been exposed to rain;**
- **The unit does not operate normally or exhibits a marked change in performance;**
- **The unit has been dropped or the cabinet damaged.**

2) Servicing Personnel: Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.

3) Replacement parts: When parts need replacing ensure the service uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other hazards.

4) Safety check: After repairs or service, ask the service to



perform safety checks to confirm that the unit is in proper working condition.

## 14. Mail-in-service

When shipping the unit, carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a daytime phone and/or email address where you can be reached.

If repair is needed during the limited warranty period the purchaser will be required to furnish a sales receipt/proof of purchase indicating date of purchase, amount paid and place of purchase. Customer will be charged for the repair of any unit received without such proof of purchase.

## 15. Warranty

If your product does not function properly because of a defect in materials or workmanship, WyreStorm (referred to as "the warrantor") will, for the length of the period indicated as Parts (3 years), Labor (90 days), at its discretion, either (a) repair the product with new or refurbished parts, or (b) replace it with a new or a refurbished product.

The decision to repair or replace will be made by the warrantor.

This period commences with the date of original purchase ("Limited Warranty period").

During the "Labor" Limited Warranty period there will be no charge for labor.

During the "Parts" warranty period, there will be no charge for parts, but the product must be mailed-in during the warranty period to qualify.

This Limited Warranty is extended only to the original purchaser and only covers product purchased as new.

A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

## 16. Warranty Limits and Exclusions

**1) This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage.**

The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service Center or other Authorized Service, or damage that is attributable to acts of God.

**2) There are no express warranties except as listed under "limited warranty coverage". The warrantor is not liable for incidental or consequential damages resulting from the use of this product, or arising out of any breach of this warranty.** (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service location, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only.)

**3) Parts and service, which are not covered by this limited warranty, are the responsibility of the customer.**

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## 17. Installation Notes

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[www.wyrestorm.com](http://www.wyrestorm.com)

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We reserve the right to change specification or product dimensions at any time.